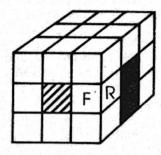
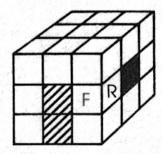
The starting positions for these sequences are shown below.



If colors match on the R face, use the sequence of moves ${\rm BR}$ to ${\rm FR}$

"Move BR to FR: B+ F+ B- F- B- R- B+ R+



If colors match on the F face, use the sequence of moves BF to FR

"Move BF to FR: B- R- B+ R+ B+ F+ B- F-

STARTING POSITIONS FOR MOVES IN STEP 3 (VERTICAL EDGES)

3D. Hold the cube so the desired cube is in the FR position. If it is incorrectly oriented, do the following reorient sequence.

"Orient FR (all 15 moves): R- B+ R+ B+ F+ B- F-B+ R- B+ R+ B+ F+ B- F-

If the 4 vertical-edge cubes are not all correctly positioned and oriented, go back to step 3A.

Error correction

These sequences are longer than those used in the previous 2 steps. Throughout these sequences of moves, only a single top-corner cube (the one that starts at FRT) is ever more than one turn away from its correct position and orientation. Should you get lost or make a mistake during one of these sequences, simply stop and reconstruct the T face. Generally, you will have to rotate either the F or R face to return cubes to the top and then repeat one of the sequences in step 2 to return the wandering top-corner cube. Having done this, try again starting at step 3A.

Short cuts

- 1. It is rarely necessary to drop FR to the B face (step 3B). Simply place and orient those cubes already on the B face into their correct positions. This will automatically drop another edge cube to the B face.
- 2. (Expert) A major reduction in the number of moves required can be achieved by combining step 2 (top corners) and step 3 (vertical edges). You may have noticed that the sequences in step 3 unravel, and then partially repeat, those of step 2. Try to figure out how to combine the 2 steps.